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President: Mr. Pecsteen de Buytswerve (Vice-President) ..... (Belgium)

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In the absence of Ms. Chatardova (Czechia), Mr. Pecsteen de Buytswerve (Belgium), Vice-President, took the Chair.

The meeting was called to order at 10.05 a.m.

Agenda item 8: Integration segment

Opening of the segment

1. **The President**, opening the integration segment of the Economic and Social Council, said that while significant progress had been made in implementing the 2030 Agenda for Sustainable Development, the world was still afflicted by economic uncertainty, rising inequalities and increasing impacts of climate change. At a time when multilateralism and multi-stakeholder engagement were paramount, the Council was uniquely equipped to advance sustainable development and provide a central platform for fostering dialogue and finding integrated solutions.

2. Under the theme "Innovative communities: leveraging technology and innovation to build sustainable and resilient societies", the 2018 integration segment would bring together key stakeholders and analyse pathways to building resilience through integrated policies with a view to advancing the 2030 Agenda. In that context, the segment must discuss how policymakers could use integrated policy approaches to enhance resilience and inclusion at all levels; promote the meaningful exchange of best practices in leveraging technology and innovation for a resilient future; showcase policy instruments and mechanisms that supported risk management and reduction across the hazard spectrum; and discuss how technology and innovation could strengthen the resilience of public policy and governance structures with a view to fostering sustainable and resilient societies.

3. Despite the relevance and importance of resilience to both developed and developing countries, there was no blueprint for what constituted resilience or how to accomplish it. While approaches to the multidimensional concepts of resilience and vulnerabilities might differ, the 2030 Agenda had charted the way forward and provided the necessary tools. Additionally, the appropriate, efficient, equitable and sustainable use of technology and innovation could support international efforts to build and maintain resilient societies. The current segment was the ideal place to share knowledge and lessons learned in order to avoid the mistakes of the past and encourage integration among the relevant sciences and disciplines. While achieving integration with a view to realizing the 2030 Agenda and addressing the multitude of hindrances to resilience was no easy task, the international community had a duty to urgently address those interconnected and complex challenges, whether they related to policy, stable and sustainable financing, capacity-building or to closing capacity and technological gaps. National policies and structures would continue to be at the heart of implementation efforts, but strong collaboration with all partners towards common country development objectives would be essential to ensuring concerted and coherent actions at every level.

4. **Mr. Jamoliddin** (Deputy Minister of Economic Development and Trade of Tajikistan), said that his country was a key source of water for Central Asia, and 60 per cent of its water resources were located in glaciers. As a result, the national hydropower sector was very vulnerable to the impacts of climate change, which had already led to an increase in natural disasters and had degraded the ecosystem. Each year, the effects of climate change destroyed facilities and led to significant financial losses for citizens and the national economy. The effective use of water resources in the face of that phenomenon would be an important factor in achieving the Sustainable Development Goals. Tajikistan had worked with the United Nations to launch the International Decade for Action, "Water for Sustainable Development", 2018–2028 in order to promote collaboration in that regard.

5. The implementation of the 2030 Agenda in Tajikistan was taking place against the backdrop of increasing threats and crises, including food and climate crises, the degradation of environmental resources, natural and human-caused disasters and the spread of disease. Threats of that nature significantly undermined peace and security and stability in the world, and could hamper the progress of sustainable development. His Government was working with international partners to repair, modernize and build resilient hydropower stations. By implementing international best practices, it was also making progress in forecasting, assessing and managing climate risk. The construction of hydroelectric facilities also served to decrease water-related threats.

6. The Government collaborated with partners at the regional and international levels to mitigate risks and improve the economic, social and environmental aspects of development. It would continue to cooperate fruitfully with the international community and the United Nations system, including the Economic and Social Council, to achieve its goals.

7. **Mr. Liu** Zhenmin (Under-Secretary-General for Economic and Social Affairs) said that advances in science and technology held immense promise for achieving the Sustainable Development Goals.

However, the rapid pace of technological change made it difficult for Governments and societies to benefit from innovations, and the advantages of cutting-edge breakthroughs were often not equally accessible to all members of society. In order to truly leverage the benefits of science and technology for sustainable development, the international community must prioritize pro-poor, equitable solutions.

8. Science and technology contributed to finding solutions to a number of major risks that exacerbated vulnerabilities and had a regressive impact on development, climate change foremost among them. Technology could provide the tools to teach and empower disadvantaged groups in society with a view to combating rising inequality, vulnerability and exclusion, which were undermining the sustainability and resilience of societies and eroding human rights. In response to the challenges of urbanization, technology could help to make cities smarter and more sustainable by facilitating new transport systems and improving natural resource management. Innovations in sustainable fishing, enhanced surveillance of ocean acidification and environmentally sensitive forms of pollution prevention and clean-up had been shown to help mitigate and address environmental degradation caused by climate change and unsustainable consumption and production patterns.

9. Technologies must be geared towards supporting sustainable and resilient societies. In that connection, the Technology Facilitation Mechanism was designed to provide a platform for discussing and accessing information, best practices and lessons learned in science and technology, as well as policies and initiatives to facilitate innovation. The Mechanism consisted of an online platform and a collaborative multi-stakeholder forum on science, technology and innovation for the Sustainable Development Goals.

10. In order to leverage technologies and innovation to build sustainable and resilient societies, efforts to support communities should be tailored and locally driven. Communities, municipal governments and community-based organizations all contributed critical, local knowledge and experience. Furthermore, the use of technology and innovation must be inclusive and leave no one behind, as sustainability and resilience relied fundamentally on equity. Integrated approaches must be implemented with the utmost urgency. Given that crises and shocks were increasingly complex and spanned the economic, social and environmental spheres, working across silos would help to focus on the potential co-benefits and trade-offs of policy interventions and technologies. Finally, the international community must build capacities and institutions for anticipating risk, and for planning with a view to effectively leveraging technologies.

Interactive dialogue on "The quest for resilience and sustainability: seizing the moment"

11. **Mr. Porter** (Journalist and book author), moderator, said that resilience was one of the most important challenges facing the global community. The shock of climate change would be significant, have the greatest impact on the poorest States and require a tremendous international response. Nevertheless, it was not the only shock to consider in building resilience. Technological shocks would affect labour markets around the world and change patterns of globalization. The advent of labour-replacing technology would also create new challenges for development strategies. Political challenges, which could arise unexpectedly, would be another issue. For example, a potential trade war among the world's largest economies would have far-reaching impacts, especially on the poorest States.

12. Technology would play a role in the necessary energy transition for climate change adaptation and mitigation, but it would not be a panacea. In fact, the main challenge facing some countries, such as the United States, was the need to mobilize political will. For other countries, investing in the energy transition would be costly and require resources. For instance, poor countries likely to be flooded by rising sea levels must determine how much to invest in mitigation and reducing their carbon footprint, and how much to invest in industrialization in order to create a society less dependent on agriculture and more able to cope with the effects of climate change.

13. The greatest political challenge would lie in allocating resources and reaching consensus at the international level. However, the challenges arising from climate change would not be addressed by policy alone; business leaders and civil society must also contribute. While technology could clearly play an immediate role in the context of climate change and energy transition, he wondered how it could help to address the broader challenges.

14. **Mr. Recht** (Chief Executive Officer of Solute Inc. and Senior Engineer of Otherlab), panellist, accompanying his statement with a digital slide presentation, said that technology could make it easier to deploy the right solutions, but it could not generate the will to do so. Resilience consisted of three categories: changing human behaviour in response to crises, improving existing infrastructure, and building new and different infrastructure. The inventors at Otherlab focused on the latter, in an effort to make

resilient inventions. For example, with regard to renewable energy technologies, the Makani kite was a flying wind turbine with the wingspan of a jumbo jet, designed to sit in the jet stream and fly continuously at an 8[illegible] barrel roll to generate wind. During a storm, it could land and be out of danger. The company Sunfolding, an offshoot of Otherlab, had replaced the metal racking on the back of solar panels with compressed air bellows to allow the panels to lie flat during a storm. In both of those examples, heavy, stiff objects were replaced with light and flexible ones that would be cheaper and easier to deploy. To facilitate the production of those inventions, Otherlab had replaced heavy, energy-intensive steel robot arms with inflatable robots that were safe, easy to use, cheaper and more efficient. The new robots also allowed for human-centred manufacturing, in which machines and people could work together. Nevertheless, the inventors at Otherlab could only provide their best, newest inventions; it was up to the international community to implement them.

15. **Mr. Porter** (Journalist and book author) wondered how the international community could ensure inclusive responses in combating rising inequality in the global economy.

16. **Ms. Patel** (Founding Director of the Society for Promotion of Area Resource Centres and Chair, Slum/Shack Dwellers International), panellist, said that the poor women with whom she worked often wondered why companies did not collaborate with the poor to produce items for them. Instead, they were sold out-of-date technology, second-hand furniture and electricity-guzzling equipment.

17. In many developing countries, even in the context of growing urbanization, most policies were focused on increasing rural opportunities to prevent people from moving to the cities. However, climate change and economic distress were driving them to cities, and production facilities were turning villages into towns. Given that very few people owned most of the land and assets, poverty was expanding and impacting multiple generations. Within the framework of the 2030 Agenda and the Paris Agreement under the United Nations Framework Convention on Climate Change, the international community did not have much time to reach its goals. Governments, civil society organizations and national technology mechanisms were simply not equipped to act on the scale required. As a result, solutions must integrate scalability and leapfrogging. Furthermore, the poor must be treated as partners rather than charity cases or beneficiaries. In the global South, over 50 per cent of the population was under the age of 30 years. Those young people were impatient for progress. They were also globally connected. One in three adolescents in Mumbai had a second-hand smart phone, but had no secure place to stay, formal identity or direct access to drinking water, sanitation or electricity.

18. Her organization worked to create federations of the urban poor in order to build their capacity to partner with private-sector institutions, non-governmental organizations, Governments and cities. In approximately 60 to 80 per cent of cities in developing countries, the people were not formally counted and did not have official identities or access to services. The majority of people who required assistance worked outside of formal institutions. She therefore called on all States to acknowledge the informal labour market and provide those people with an identity, as their active participation was essential to fulfilling international commitments. Furthermore, States must abandon the artificial urban-rural divide. Every person in urban areas in Nepal, India and South Asia contributed significantly to their kinship groups in rural areas.

19. The international community must also seek new methods and partnerships to implement timely solutions. Unfortunately, it did not currently have the mindset to do so. Representatives of national Governments still relied on eighteenth- and nineteenth-century models that portrayed poor people as a threat to cities and focused on sending them back to rural areas. To build resilience, the international community should look to the poor. Those living in vulnerable areas faced water shortages, flooding or mudslides on a daily or annual basis and had already implemented solutions that relied on cultural and collective behaviour.

20. **Mr. Porter** (Journalist and book author) said that young people would bear the brunt of many of the problems created by older generations. He wondered what new solutions they would bring to old problems, and how they could be motivated to engage and put pressure on Governments.

21. **Ms. Amatya**, speaking on behalf of the major group for children and youth, panellist, said that resilience was a multidimensional concept with social, economic, political and demographic aspects. Sustainability required an inherent capacity for resilience. Individuals, communities, institutions and Governments must be able to prevent and recover from risks and hazards, adapt to change and build back better. With technological advancements in digitalization and data innovation, key stakeholders must encourage youth engagement in order to be effective. There were 1.8 billion young people in the world, over 85 per cent of whom lived in developing countries. Young people

had the potential and the willingness to be agents of change and bring about transformative and disruptive solutions. They were driven to find innovative solutions and adapt to uncertainties.

22. The approach to resilience must be sociocultural, socioeconomic and human rights-based. It should also take into consideration the rights of the planet. Education was a critical factor, in particular education for sustainable development. The international community must therefore invest in building stronger educational infrastructures, improving teaching methods, integrating technology and innovation in education and promoting lifelong learning. It must also support and invest in capacity-building for young people and youth-led organizations, especially at the grass-roots level, with a view to raising awareness of the importance of youth civic engagement, social transparency, local governance and innovative development solutions. Strategic and influential leadership at all levels, as well as intergenerational partnerships, would be crucial to that end.

23. Young people must be meaningfully engaged through proper outreach and advocacy. Governments must identify entry points in local sectors and mainstream youth issues in all stages of development planning. Additionally, young people must be included in policymaking. Engagement platforms, such as social media, information and communications technologies (ICTs), new mobile technologies and crowdsourcing, had proven to be effective tools for advocacy, outreach and resilience. For example, after the 2015 earthquake in Nepal, the country's young people had leveraged technology and innovation across engagement platforms to conduct open data mapping, raise funds and mobilize other young people around the world. Those engagement platforms must be further utilized and adapted to specific contexts.

24. Young people had played a key role in formulating a number of international policies. For example, the Sendai Framework for Disaster Risk Reduction 2015-2030 formally established that young people were agents of change and should be given the space and modalities to contribute to disaster risk reduction, in accordance with legislation, national practice and educational curricula. Security Council resolution 2250 (2015) recognized the important contribution that young people made to peacebuilding, and the 2030 Agenda emphasized the critical role that they could play in the achievement of the Sustainable Development Goals. However, the progress made in establishing those policies would be meaningless if Member States did not incorporate them in their national policies and plans.

25. Perhaps the biggest challenge would be to sustain the progress that had been made. There must be a shift from reactive to proactive approaches and from short-term solutions to long-term, sustainable development gains. One of the barriers to meaningful youth engagement was the lack of dedicated resources. The international community should therefore prioritize youth-sensitive budgeting for youth issues, especially in the context of government fiscal planning. It must also promote the participation of excluded and vulnerable young people, as well as women and girls. Without inclusivity, achieving the Sustainable Development Goals would be a distant dream, and if the international community did not capitalize on the willpower of young people, the demographic dividend would become a demographic disaster.

26. **Mr. Porter** (Journalist and book author) asked what urgent actions the international community, Governments and the private sector should be taking, what were the potential trade-offs, and how Governments and businesses could balance the need for development with the need for climate mitigation.

27. **Mr. Recht** (Chief Executive Officer of Volute Inc. and Senior Engineer of Otherlab) said that, from a technical perspective, Governments and private businesses should focus on supplying electric power; installing wind, solar and nuclear capacity; and providing as much funding for innovation as possible. They should make decisions that looked to the future, such as building the foundations for facilitating future clean energy projects and avoiding coal power plants. They should also identify and break down barriers to such projects.

28. **Ms. Amatya**, speaking on behalf of the major group for children and youth, said that the international community must take an integrated, cross-sectoral, multi-stakeholder, sustainable approach to science and technology, and promote increased investment at all levels. Innovative solutions must be contextualized to meet the specific needs of local communities, and decision-making should be evidence-based and demand-driven. In order to ensure resilient and sustainable societies, the United Nations should promote coherence among the science and technology frameworks across the Organization with a view to establishing more robust science and technology road maps at the national level. The Council should continue to facilitate knowledge-sharing among United Nations entities, Member States, civil society and other stakeholders.

29. **Ms. Patel** (Founding Director of the Society for Promotion of Area Resource Centres and Chair of Slum/Shack Dwellers International) said that the real

challenge was fulfilling global commitments and aspirations at the local level. The urban poor and their social movements must build their own capacity to begin constructive dialogues with technology providers, government agencies and local governments. Her organization and the network of Slum/Shack Dwellers International promoted partnerships at the local level between groups that had generally been at odds, such as the construction industry and slum dwellers who constantly fought over evictions.

30. At the international level, municipal associations felt the same sense of disenfranchisement as the urban poor. They constantly sought greater resources to assist their constituencies, both formal and informal, but were constrained by national policies in providing that assistance. Groundbreaking technology and sweeping commitments would fall flat without successful implementation at the local level.

31. **Mr. Aguirre Vacchieri** (Chile) welcomed the presence of a panellist representing the technological aspects of resilience, in addition to the political and social aspects. Given that public-private partnerships were fundamental to the implementation of the 2030 Agenda, he asked the panellists what their organizations had done to collaborate with their respective counterparts in the other sector.

32. **Ms. Patel** (Founding Director of the Society for Promotion of Area Resource Centres and Chair of Slum/Shack Dwellers International) said that, in the global South, most of the infrastructure was constructed by private-sector companies. In 80 per cent of those projects, a significant number of poor people were evicted. Slum/Shack Dwellers International had therefore begun a dialogue with the 15 major engineering companies operating in the global South to change the way in which they mapped locations for building infrastructure and to ensure that inhabitants without identities were counted and taken into account. At the same time, the organization called on Governments to change their tender processes and undertake critical public infrastructure projects in a way that did not destroy the lives of some to provide benefits to others. Slum/Shack Dwellers International also collaborated with private-sector companies, Governments and associations of municipalities at the national and international levels.

33. Until 2017, non-governmental organizations in the global South had been unaware that there were different generations of solar panels, and much of what they had received had stopped functioning after a short period of time. They were now trying to reach out to private-sector companies to develop products with them jointly. Collaboration was also important to ensure that items could be adapted to different cultures. For example, beautiful cookstoves designed for cooking in the North were given to poor women in the South unable to use them, which was a waste of quality investments.

34. **Mr. Recht** (Chief Executive Officer of Volute Inc. and Senior Engineer of Otherlab) said that Otherlab tried to maintain a connection to the developing world by inventing technology designed for people who were not served by the traditional United States innovation system. Such inventions included inflatable structures that could be deployed inexpensively to allow nurses and doctors to quarantine patients, as well as cardboard aircraft that could be dropped from an airplane and deliver relief supplies to a precise target. He encouraged the international community to approach Otherlab with projects and problems. The inventors loved challenges and wished to stay connected to the public sector. Within the developed world, particularly in the United States, it was easy to stay connected to the Government because of its involvement in research. However, Otherlab had to make a concerted effort to reach others.

35. **Ms. Sindi** (Observer for the Islamic Development Bank) said that resilience also depended on integrating indigenous knowledge into science, technology and innovation. Indigenous communities relied on ancestral knowledge to survive in very harsh conditions, such as famine, drought, flooding, earthquakes and outbreaks of infectious disease. Furthermore, the values, traditions and religions of indigenous peoples must be taken into consideration to provide them with the necessary tools and information to strengthen their resiliency. In the developing world in particular, indigenous communities were most impacted by food crises and outbreaks of disease. The 10-member group to support the Technology Facilitation Mechanism had concluded that indigenous knowledge should be integrated into society. She wished to know how the international community could promote indigenous knowledge and encourage the establishment of research centres in that regard.

36. **Mr. Recht** (Chief Executive Officer of Volute Inc. and Senior Engineer of Otherlab) said that the most immediate thing that a technologist could do was to listen. In the 1950s, the paradigm of research was to invent a solution and then look for the problem. Since then, researchers had learned to listen. Most of the technology companies in California, in the United States, employed ethnographers who went into the field to analyse the needs of people. That trend would help to find indigenous knowledge and reflect it in technical solutions.

37. **Ms. Amatya**, speaking on behalf of the major group for children and youth, said that it was important to link local indigenous knowledge to modern technology in building resilient systems for society. Innovative solutions that used modern technology must be context-specific. In particular, indigenous and local knowledge had played an important role in early warning systems and risk assessment. The culture, diversity and experiences of local and indigenous peoples must be incorporated into policy and planning, as well as public-private partnerships.

38. **Ms. Patel** (Founding Director of the Society for Promotion of Area Resource Centres and Chair of Slum/Shack Dwellers International) said that intergenerational knowledge carried by women and diversity within poor communities were celebrated in her work. Her organization challenged the poor to demand to be recognized and to be more than beneficiaries and consumers of development. Mutual respect was vital to collaboration that incorporated technology and local knowledge. Currently, there were not enough cultural protocols in place to make that happen. The ideas of empowerment and participation were frequently discussed but rarely benefited the poor. The international community could not afford to wait another decade to develop those relationships.

39. **Ms. Wynhoven** (International Telecommunication Union) said that technology could be a key tool for resilience and sustainability, but gender divides often impacted access to technology and skill acquisition for women and girls. Given that achieving the Sustainable Development Goals would require their full participation, she asked the panellists to share lessons learned in addressing those barriers.

40. **Mr. Recht** (Chief Executive Officer of Volute Inc. and Senior Engineer of Otherlab) said that Otherlab had a number of female leaders. For example, Danielle Applestone had founded Other Machine Co., which had made a low-cost, computer-controlled milling machine with a view to democratizing manufacturing. As a female engineer, she had considered how to increase access to manufacturing tools for a more diverse population. Female technical leadership at the outset had allowed that technology to reach women and girls. The process of bringing technology across the gender divide must start with promoting the technical education and leadership of women and girls.

41. **Ms. Patel** (Founding Director of the Society for Promotion of Area Resource Centres and Chair of Slum/Shack Dwellers International) invited those in attendance to consider what actions their Governments and networks could take to produce the transformation that was desperately needed at the local level so that the role and contribution of young people, women and the urban poor was duly recognized.

42. **Ms. Amatya**, speaking on behalf of the major group for children and youth, said that sustainable development and resilience could not be viewed as two separate goals. Resilience was crucial to the success and sustainability of development efforts. Youth must be at the centre of those initiatives, as the involvement of young people was paramount to achieving the Sustainable Development Goals. Attention should therefore be given to building resilience and empowering youth.

43. **Mr. Recht** (Chief Executive Officer of Volute Inc. and Senior Engineer of Otherlab) said that the international community must recognize the value of research conducted by small organizations and companies in the developed and developing world. In the United States and Europe, research was centred around large universities, research centres and capital investments. However, it had become clear in the past two decades that 20 people in a garage could accomplish the same results. States with a small national budget might not be able to afford a national lab, but they could afford to fund small-scale, simple research efforts.

44. **Mr. Porter** (Journalist and book author) said that he wrote about resilience in the context of the United States, which was smaller and more cohesive and had more resources than the world as a whole. He was discouraged by the difficulties that the United States encountered in mobilizing resources to address imminent problems and expressed concern about the ability of the international community to do the same. He therefore urged those in attendance not to be complacent. Although formally establishing global goals and timetables was an important part of the process, it was also the easiest part. In implementing policies to achieve those goals, Governments would anger or hurt some constituencies and make politically difficult trade-offs. On the other hand, the world had faced significant challenges in the past and had demonstrated enormous resilience in other contexts.

45. *A video presentation entitled "Climate change in Fiji in virtual reality: our home, our people" was shown.*

Session 1: Panel discussion on "Resilience decoded — building blocks towards 2030"

46. **Mr. Carvalho Pinheiro** (Special Representative to the United Nations and Director of the International Labour Organization Office in New York), moderator, said that it was important to understand the difference between resistance and resilience. Resistance focused

on defeating the impact of a disaster or disturbance and resuming normal operations afterwards, while resilience focused on limiting the impact of the event, absorbing it and adapting the system to respond. The concept of resilience had first been introduced in the natural sciences and then translated to the social sciences, information technology and business. In the context of ecology, resilience referred to the capacity of an ecosystem to maintain its fundamental structure, process and functioning when subjected to stress, disturbance or invaders. The concept was relatively new for the United Nations, but was included in the 2030 Agenda, where it was mentioned in relation to refugees, disasters, climate change, poverty reduction and marine and coastal ecosystems. The International Labour Organization discussed resilience in terms of employment, decent work and peace. Resilience also featured in discussions concerning the transition to a greener economy, moving from fossil fuels to a more sustainable path; social protection, empowering people to be resilient to shocks; and labour markets and the future of work, increasing resilience to changes in technology. It would be helpful to discuss the main risks that communities were facing at the local, national and regional levels and what could be done to address them.

47. **Ms. Mucavi** (Director of the Food and Agriculture Organization Liaison Office in New York), panellist, said that people around the world were increasingly exposed to natural hazards and crises, which were having devastating consequences on food security. According to the 2018 Global Report on Food Crises released by the Food Security Information Network, the number of people suffering from acute hunger had increased from 108 million in 2016 to 124 million in 2017. The main drivers of acute food insecurity were conflicts and climate shocks. In the last seven years, an average of 22.5 million people had been displaced each year by climate-related disasters, most often from flooding and storms. Unfortunately, climate-related disasters were expected to intensify further. According to The State of Food and Agriculture, issued by the Food and Agriculture Organization of the United Nations in 2016, an additional 35 million to 122 million people could be living in extreme poverty by 2030 as a result of climate change.

48. Despite increasing urbanization, approximately 75 per cent of the world's poor lived in rural areas. They derived their livelihoods, labour income and food primarily from agriculture. A poor rural family might be able to withstand drought for a time, but recurring drought would make recovery difficult. At a certain point, negative coping strategies, such as selling their productive assets, might be required. The international community must therefore scale up prevention interventions. A number of studies had confirmed that it was four to seven times more cost-effective to invest in disaster risk reduction than to rely on emergency responses. There was an urgent need to strengthen the resilience of households, communities, institutions and ecosystems in order to more effectively address the threats and disasters that impacted agriculture, food security and nutrition.

49. **Mr. Carvalho Pinheiro** (Special Representative to the United Nations and Director of the International Labour Organization Office in New York) said that it was important to emphasize prevention and adopt an approach to cope with the results of a disaster. With regard to urban areas, he asked how smart cities could contribute to adaptation and resilience.

50. **Ms. Datta** (Reader in Urban Futures at King's College London), panellist, accompanying her statement with a digital slide presentation, said that the international community must critically assess its approach to implementing smart technologies in existing cities, particularly in the global South, and the impact of those technologies on the everyday lives of the urban poor.

51. A lack of infrastructure, or broken or disconnected infrastructures, had a very real impact on the lives of marginalized and poor communities. Such factors made women more vulnerable, especially when they had to access open land for defecation or public water taps for collecting water. Top-down smart-city policies sought to address related safety issues by asking women to crowdsource data on mobile applications. However, it was important to understand how technology was used in low-income communities: second-hand mobile phones were often unable to download the necessary data and were frequently shared among family members. Nevertheless, women did use their mobile phones to create as an information infrastructure via messaging applications or text messages. They communicated safe or unsafe locations, the location of available infrastructure, when the water would come to the public tap and which public toilets to use.

52. In the context of resilience, there must be deeper reflection and critical assessment of top-down policies and initiatives in order to understand their limitations. Smart-city agendas must mainstream gender vulnerability and be aligned with the Beijing Declaration and Platform for Action and the Sustainable Development Goals. Policymakers must move beyond providing digital skills and literacy, and seek to understand the financial, economic, social, institutional and structural constraints that women faced when using technology to access safe spaces and infrastructure.

53. Resilience was not an inherent quality of communities, but rather emerged from the failure of local, national and international policies to cater to their needs. Safety must be seen as a necessity, not as a by-product of resilience, and the possibility of establishing the right to a smart city should be given consideration. Furthermore, resilience should be decoded along multiple axes of vulnerabilities, including gender, age, disability and class.

54. **Mr. Carvalho Pinheiro** (Special Representative to the United Nations and Director of the International Labour Organization Office in New York) asked how psychology could help to accelerate the achievement of the Sustainable Development Goals.

55. **Ms. Jaipal** (Main Representative of the American Psychological Association at the United Nations and Professor Emeritus at the Cross-cultural Psychology Center for Cultures and Communication and Alternative Visions for the Future, Bloomfield College), panellist, accompanying her statement with a digital slide presentation, said that psychological resilience consisted of a number of behaviours and actions, such as problem-solving, self-confidence, emotion regulation, motivation to succeed, meaning-making and viewing change as a challenge or opportunity. Those qualities developed from external factors, such as supportive parents or caregivers; close relationships with peers, extended family or communities; effective community schools and neighbourhoods; and qualities of faith and hope embedded in spiritual and cultural beliefs. The core of resilience was a strong sense of identity, based on cultural or social values and norms. Strong relationships and social support networks were therefore paramount to building resilience. Risk factors for resilience included the erosion of social relationships, community bonds, cultural or social identity and self-confidence, as well as deprivations affecting early childhood development, such as inadequate nutrition, ineffective schooling and impoverished neighbourhoods.

56. According to the World Health Organization, mental health problems and suicide were the second leading cause of death for young adults between the ages of 15 and 29 years. Low- and middle-income countries had the highest rates of youth suicide globally. In 2014, the United States suicide rate had reached the highest level in nearly 30 years. In the United Kingdom, girls aged 10 to 15 years had been unhappier with their lives and appearances in 2014 than they had been five years earlier, and rates of anxiety and depression in young people had risen by 70 per cent in the past 25 years. The rising rates of youth mental health problems and suicide around the world suggested that the current model of development was unsustainable and could be creating new risk factors for resilience.

57. There was a growing body of research on the effects of ICT on cognitive and social functioning for children and adolescents. The use of electronic media was associated with poorer memory and cognitive performance, faster and less accurate responses, delayed bedtime and shorter sleep time. Sleep deprivation had long-term effects on adolescent mental health. Insomnia symptoms were associated with the use of alcohol and drugs, depression and suicide ideation and attempts. The use of ICT also seemed to be eroding self-confidence. Surveys in Europe and the United States had found that the use of social media for people aged 18 to 34 years had been associated with depression, anxiety and feelings of inadequacy and unattractiveness. The use of Facebook was significantly related to decreases in well-being, especially for women and groups with little education and low income. Moderate to heavy use of social media, especially Instagram and Snapchat, was also linked to increased rates of anxiety, depression, poor sleep, loneliness and isolation in youth.

58. Additional risks facing young people from the use of ICT included a distorted view of reality, sexting, revenge porn, cyberbullying and privacy issues. At a recent side event organized by the Commission on the Status of Women, representatives of developed countries had spoken exclusively about digital damage, online violence against girls, trauma from cyberbullying, mental health problems and suicide, whereas those from developing countries had presented science, technology, engineering and mathematics education programmes and technologies as a means of promoting the economic empowerment of rural girls.

59. Acculturation stress referred to psychological changes that occurred with culture contact and could vary in intensity. Consumer culture values spreading through electronic media were eroding traditional values and seemed to be causing acculturation stress, especially for vulnerable or marginalized populations in low- and middle-income countries. When cultures with conflicting norms and values came together, it could cause identity confusion and anxiety. Given that culture contact was inevitable, it must be addressed in a way that promoted health, especially for young people. Recent findings from India on the mental health of high school and college students had found that increased pressure to assimilate to a consumer culture led to higher the levels of anxiety, depression and family conflict.

60. Access to the Internet and electronic media was one of the most important factors in development, but it

could come with unanticipated costs to youth mental health in both developed and developing countries. In order to combat those new risk factors, it was important to raise public awareness about the possible risks of ICT usage; include warning labels on ICT products, especially for young children; raise awareness among parents about the effects of mobile phone and social media use on children; teach safe social media use in schools; and introduce heavy usage pop-up warnings on social media sites. Consumer protection bureaux must assess the costs and benefits of new devices before they were mass-marketed, especially to children. Schools and universities should teach critical thinking about consumer culture and incorporate diversity training in curricula. There should be integration policies for ethnic minorities, migrants and refugees that protected the cultural identity of both the incoming and host cultures. Community-building programmes should strengthen community bonds in neighbourhoods and schools. Support should be provided to parents and caretakers to ensure healthy early childhood development. Finally, the costs as well as the benefits of technology must be assessed, and more research needed to be conducted on its effects on resilience.

61. **Mr. Carvalho Pinheiro** (Special Representative to the United Nations and Director of the International Labour Organization Office in New York) wondered how the international community could address the needs of those left furthest behind.

62. **Ms. Bartha** (Senior Advisor at the International Disability Alliance), panellist, delivering her statement on behalf of Together 2030, said that Together 2030 was a global action-oriented initiative to generate and share knowledge on the implementation of the 2030 Agenda that brought together civil society stakeholders from around the world. Resilience was essential to sustainable development and should not be viewed in isolation. The integrated and holistic approach outlined in the Sustainable Development Goals was critical to strengthening resilience. Building resilient societies required a transformative shift that could not be limited simply to the built environment but must also be based on the right to life and the right to be included. As such, resilient societies must be founded on respect for inherent dignity; non-discrimination; full, effective and meaningful participation; equal opportunities; accessibility; partnerships; gender equality; and the rights of children and older persons.

63. One of the key risks to the resilience of individuals and communities was a lack of empowerment, as they were denied a voice in critical decision-making. Governments and other key stakeholders often lacked the knowledge and will to provide appropriate forums for inclusive participation. Vulnerable and marginalized groups must be included in planning, implementing and monitoring policies. Barriers to active participation must be removed, and capacity-building programmes must be enhanced. For example, in order to include persons with disabilities in meaningful dialogue, venues must be accessible for wheelchair users and provide sign language interpreters, braille materials and closed captioning. Technology must also be accessible to persons with disabilities.

64. Together 2030 had conducted a mapping to assess the factors that impacted civil society participation. Given the lack of reliable monitoring and non-traditional data, people living in poverty and vulnerable groups were not being represented. Studies prepared for the voluntary national reviews presented during the 2017 high-level political forum on sustainable development had found that only 14 countries had noted the availability of data for leaving no one behind, and 11 countries had noted a lack of disaggregated data. It was therefore impossible to know who was being left behind or why. The messages of the Sustainable Development Goals often failed to reach people at the grass-roots level. The 2030 Agenda must therefore be incorporated at the subnational and local levels, and national aspirations and advocacy must be connected to the work at the regional and international levels.

65. **Ms. Fukuda-Parr** (Professor of International Affairs at The New School for Social Research and Vice-Chair of the twentieth session of the Committee for Development Policy), discussant, said that technological innovations must serve the needs of the poor, facilitate inclusive development and be tailored to address the priorities of the 2030 Agenda. However, the international community must realize that some fundamental systems were creating winners and losers, as well as gaps in technological progress. While the market was stimulated by investments in research and development, it was unable to ensure that technological developments met the needs of those who were not meaningful market actors. That issue could be overcome by private initiatives, social entrepreneurship and Governments. The intellectual monopolies created by patents, which served to incentivize private investment, could also be a significant obstacle to access to technological breakthroughs and were increasingly embedded in multilateral and plurilateral trade agreements. International investment and trade rules could sometimes be at odds with the principles of human rights. Urgent action must therefore be taken to ensure that technology and innovation targeted the economic, social and environmental needs of those left furthest behind, in particular with regard to medical innovation,

green energy and technology, and food technology. Additionally, States must work together to mobilize financing for priority technological development.

66. The Committee for Development Policy would be recommending a record number of least developed countries for graduation. However, countries that graduated remained vulnerable and still required a great deal of support. New measures were needed to increase support for graduated countries, especially those that were highly vulnerable to environmental threats and economic shocks.

67. **Mr. Keane** (Rapporteur of the Permanent Forum on Indigenous Issues), discussant, said that, in order for individuals and societies to be resilient, they must know their place in the world. The theme of the seventeenth session of the Permanent Forum on Indigenous Issues had been "Indigenous peoples' collective rights to lands, territories and resources", and 1,400 indigenous peoples had attended.

68. All the Sustainable Development Goals impacted indigenous peoples, who served as the best example of resilience. They had been victims of extermination attempts and genocide and, for many years, they had been considered obstacles to Western notions of progress and development. Nevertheless, they were reaching out to dominant societies and asking to collaborate because they had a great deal to offer. In terms of development indicators, indigenous peoples lagged behind the rest of society in every State in which they lived. In order to leave no one behind, the international community must address issues of concern to indigenous peoples and ensure their active participation in the implementation of the 2030 Agenda. Efforts to reach the Millennium Development Goals had shown that what appeared to be progress on paper could sometimes have regressive effects. For example, in a number of States, incomes had increased above the poverty level, to the detriment of indigenous peoples. While indigenous people might have been able to find jobs at new plantations, the loss of their land meant that they no longer had access to clean water or sufficient food, and their quality of life had significantly decreased. Therefore, indigenous peoples must play a role in implementing the 2030 Agenda.

69. While technology could assist in achieving the Sustainable Development Goals, political decisions on topics such as land rights would also be required. The ecological and climate stability of the planet depended on maintaining the integrity of existing large ecosystems, which only existed where indigenous peoples had managed to maintain control of their territories, through their resilience.

70. Indigenous knowledge could play a significant role in addressing many global challenges. The Permanent Forum on Indigenous Issues sought to create a space for the voices of indigenous peoples within the United Nations system. The international community must further determine how to create those spaces in governance structures and decision-making processes in the context of the 2030 Agenda. For example, the United States Government Arctic policy recognized that the indigenous peoples living in the Arctic had a key role to play in its protection. The international community must also consider how to create spaces for indigenous models of development and indigenous economies, which were based on reciprocity with nature rather than its exploitation. Indigenous peoples had long been practising resilience, and there was a great deal to learn from them.

71. **Mr. Carvalho Pinheiro** (Special Representative to the United Nations and Director of the International Labour Organization Office in New York) asked how the Food and Agriculture Organization was integrating resilience with a view to accelerating the achievement of the Sustainable Development Goals.

72. **Ms. Mucavi** (Director of the Food and Agriculture Organization Liaison Office in New York) said that the Food and Agriculture Organization sought to increase the resilience of livelihoods to threats and crises that affected agriculture, food and nutrition, and, in particular, natural hazards and related disasters, threats to the food chain and food safety, and conflicts and protracted crises. Strengthening rural resilience required political will and an understanding of the risks. Technical expertise was also needed to promote research, capacity-building and innovation in agricultural systems. Furthermore, action must be taken at all levels to strengthen national capacities for risk and crisis management and risk governance for agriculture, food security and nutrition; to improve risk analysis, risk information management and early warning systems; to apply risk-reduction and conflict-sensitive measures; and to establish effective local, national and international emergency preparedness and response.

73. Under the leadership of the United Nations Development Programme, the Food and Agriculture Organization was working with other United Nations entities to prepare a system-wide analytical framework on risk and resilience, with a view to achieving the Sustainable Development Goals. Reform of the United Nations development system was built on existing experiences and resilience initiatives. It embraced a bottom-up approach and provided pragmatic guidance to United Nations country teams. There must be greater coherence in resilience-building efforts, as resilience

was key to mitigating the impacts of climate change and was urgently needed in rural areas.

74. **Mr. Carvalho Pinheiro** (Special Representative to the United Nations and Director of the International Labour Organization Office in New York) asked how to move from resistance to resilience while absorbing the impacts of ICTs, particularly on young people, and what results had been seen in urban spaces.

75. **Ms. Jaipal** (Main Representative of the American Psychological Association at the United Nations and Professor Emeritus at the Cross-cultural Psychology Center for Cultures and Communication and Alternative Visions for the Future, Bloomfield College) said that her immediate reaction to the data concerning the mental health problems created by ICTs had been one of resistance. The impact of technology on young people gave cause for concern, and they should not adapt to its negative effects. However, in terms of resilience, young people were already addressing those impacts and finding interesting solutions to protect themselves. For example, one young girl had developed an application that gave users the opportunity to reconsider posting offensive messages. In terms of resistance, the international community should demand change from corporations that profited from ICTs. Cross-cultural psychology studied how individuals were connected and embedded in their environments and cultures in a socioeconomic context, and sustainable development was very dependent upon those connections.

76. **Ms. Datta** (Reader in Urban Futures at King's College London) said that resilience was not a new concept. Rural migrants needed to be resilient long before they arrived in urban settings. In the course of her research, conducted in India over 15 years earlier, she had found that resilience had been deeply embedded in everyday lives and exchanges, as well as in survival skills. In order to be resilient, marginal communities must acquire knowledge and information to build the capacity to cope with structural, social, political or economic constraints. For example, slum and squatter communities needed to understand legal policies and statutes so that they could adequately respond to evictions and use the law to argue for their right to the city.

77. Resilience also required an understanding of where vulnerabilities emerged and how to address them. For example, gender-based violence had been societally and generationally internalized, and a number of women felt that violence in the home was normal or legitimate. Grass-roots groups in India had created a website to compile a list of the hate crimes reported by the media, thereby creating an informational infrastructure that allowed people to understand what was happening and contextualize their experiences. Strengthening resilience would also require increasing data security, enacting privacy laws and urgently addressing cyberviolence against women. In conclusion, resilience was not limited to communities overcoming obstacles; it also involved large-scale policies that allowed communities to address vulnerabilities.

78. **Mr. Carvalho Pinheiro** (Special Representative to the United Nations and Director of the International Labour Organization Office in New York) asked what resilience meant in the context of persons with disabilities.

79. **Ms. Bartha** (Senior Advisor at the International Disability Alliance) said that persons with disabilities were the most vulnerable in society. Even among that community, there were marginalized groups, such as women or indigenous peoples, who faced multiple discrimination. In some societies, children with disabilities were abused, often forced to work in the circus, used for labour or hidden away by their families. Discrimination was one of the biggest barriers to participation. In order to overcome stigma and be resilient, persons with disabilities must participate effectively in decision-making and the development of policies and programmes. They must also be involved in collecting data, which should be disaggregated to identify a number of factors. If the international community was not aware of who was being left behind, it would be impossible to address gaps in policies, programmes and projects that were designed to implement the 2030 Agenda.

80. **Mr. Carvalho Pinheiro** (Special Representative to the United Nations and Director of the International Labour Organization Office in New York) said that, while the concept of resilience was well established in the natural sciences and in environmental contexts, there was some resistance to integrating resilience into the social sciences and the field of development. Some argued that discussing resilience distracted from efforts to address the root causes of social issues.

81. **Ms. Fukuda-Parr** (Professor of International Affairs at The New School for Social Research and Vice-Chair of the twentieth session of the Committee for Development Policy) said that there were always walls between disciplines. The development field had been focused on forward progress, downside risk and threats to human well-being. There had not been much consideration for the idea that progress and regression could occur simultaneously, perhaps due to the development field's rigid approach to social issues. Universities such as The New School for Social

Research always sought to challenge conventional thinking, and the Sustainable Development Goals had introduced the idea that progress was not linear and could not rely on simple linear solutions. Much of the analysis in the field of development and poverty reduction was carried out to provide evidence-based solutions. Practitioners seemed to recognize the need for tailored, multidimensional solutions. However, the research and theoretical bases continued to resist that logic.

82. **Mr. Carvalho Pinheiro** (Special Representative to the United Nations and Director of the International Labour Organization Office in New York) said that he would be interested to hear how resilience had served indigenous peoples.

83. **Mr. Keane** (Rapporteur, Permanent Forum on Indigenous Issues) said that the level of involvement of indigenous peoples at the international level was a sign of their resilience. There had not been significant conversations between international development institutions and indigenous peoples until 1992, when they had worked to incorporate their concerns into the documents and agreements stemming from the United Nations Conference on Environment and Development. At that time, they were referred to as indigenous populations or communities, rather than indigenous peoples. They were now represented by a Special Rapporteur on the rights of indigenous peoples, the Permanent Forum on Indigenous Issues and the Expert Mechanism on the Rights of Indigenous Peoples. It was no longer uncommon to discuss the role of indigenous peoples in solving the social, economic and environmental issues that the world was facing. Their participation in realizing the Sustainable Development Goals would do more than simply allow them to continue to exist as distinct peoples; it would also benefit the rest of the world.

84. The year 2019 would be the International Year of Indigenous Languages. Every two weeks, one indigenous language disappeared. The health of a language was the best indicator of the health of an ecosystem and its biodiversity. Every time one of those languages disappeared, the world lost ecological, economic, biological and medicinal knowledge that was just beginning to be understood.

The meeting rose at 1 p.m.